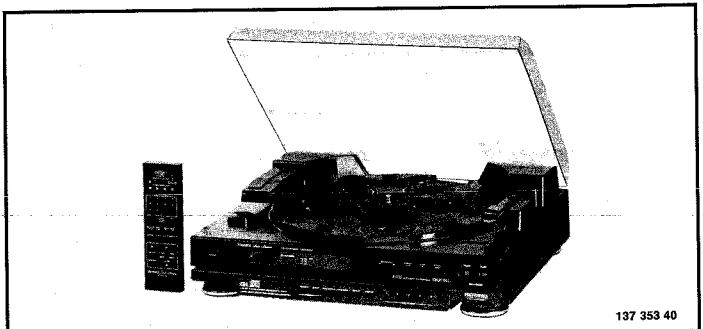
SERVICE MANUAL

FISHER

DIGITAL COMPACT DISC CHANGER/SEMI-AUTOMATIC TURNTABLE WITH RDAC-143 WIRELESS REMOTE CONTROL

DAC-9025

(EUROPE)



137 353 40

SPECIFICATIONS

System ..... Compact Disc Digital Audio
Type ..... CD Changer, 5-Disc Carousel with 33/45 RPM Function
RDAC-143 Wireless Remote Control ..... 31 Functions

AUDIO CHARACTERISTICS

Frequency Response ..... 20 Hz ~ 20 kHz
Harmonic Distortion
(20 kHz Low Pass Filter) ..... Less Than 0.07 % (1 kHz)
Dynamic Range ..... More Than 90 dB
S/N Ratio ..... More Than 90 dB
Wow and Flutter ..... Below Measurable Limits
Channel Separation ..... More Than 80 dB (1 kHz)
Output Voltage (maximum) ..... 2 Vrms

FUNCTIONS

Disc Selection ..... With DISC NUMBER Buttons (1 ~ 5)
Track Selection ..... With FFWD and FBACK Buttons or remote control's TRACK NUMBER Buttons
Index Selection ..... With SCAN/INDEX ▶| and |◀ Buttons (normal play only)
Program Selection ..... With DISC NUMBER Buttons (1 ~ 5), FFWD and FBACK Buttons or remote control's TRACK NUMBER Buttons
Scanning (fast forward/fast back)
Play mode: ..... 2-Speed Search with Sound
Pause mode: ..... 2-Speed Search without Sound
Each/Remain/Total Time Display ..... With DISPLAY Button during the PLAY mode
Program Memory ..... 32 Selections
Edit Play
Tape Length Selection ..... C-90, C-60 or C-46 with remote control's EDIT Button
Programmable Tape Length ..... C-1 ~ C-99 with FFWD and FBACK Buttons or remote control's TRACK NUMBER Buttons
Introscan Play ..... 10 seconds/track or 1 ~ 99 seconds, programmable with FFWD and FBACK Buttons or remote control's TRACK NUMBER Buttons
Random Play ..... With RANDOM Button during PLAY mode
Repeat Tracks ..... One/All/Program
Program Reset ..... With CLEAR Button
Checking Program ..... With remote control's CHECK Button
Pause ..... Each Track
Disc Loading ..... Top

DIGITAL SIGNAL PROCESSING

Optical Pickup ..... 3-Beam Laser
Sampling Frequency ..... 44.1 kHz
Filters ..... 18-Bit, 8 Times Oversampling Digital Filter 2-Pole, Active Filter
D/A Conversion ..... Dual 16-Bit Linear

– Specifications and design are subject to change without notice. –

REFERENCE No. WM-570621

SPECIFICATIONS (Continued)

GENERAL

Power Requirements (50 Hz) ..... 220 V
20 Watts
Dimensions (W x H x D) ..... 440 x 138 x 355 mm
Weight (approximate) ..... 5.2 kg

TURNTABLE SECTION

Operation ..... Semi-Automatic
Motor ..... DC Servo
Drive System ..... Belt

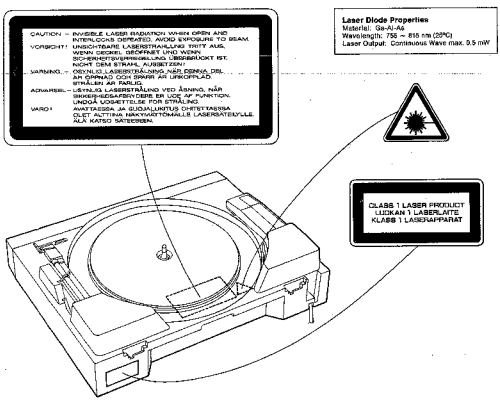
Wow and Flutter (WRMS) ..... 0.08 %
Rumble (DIN 45539B) ..... 65 dB
Speed Variation ..... < 1 %
Platter Diameter ..... 12.9"
Record Speed Selector ..... 33-1/3 rpm;45 rpm

Automatic Tonearm Return
at End of Record
Manual Functions
Start
Stop

Tonearm Data
Resonance ..... < 15 Hz
Effective Length ..... 205 mm
Shape ..... Straight
Max. Tracking Error ..... + 4.2°/ − 1.8°
Cartridge
Model No. MG-09
Type ..... Moving Magnetic
Cueing ..... Viscous Damped

– Specifications and design are subject to change without notice. –

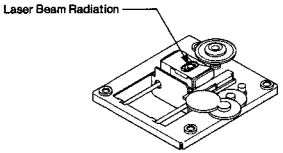
SAFETY CERTIFICATION


CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
VORSICHT! UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT DEM STRAHL AUSSETZEN!
VARNING – OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
ADVARSEL – USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO! AVATESSSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
Laser Diode Properties
Material: Ga-Al-As
Wavelength: 750 ~ 815 nm (25°C)
Laser Output: Continuous Wave max. 0.5 mW
CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

CAUTION – USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THE COMPACT DISC PLAYER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT QUALIFIED SERVICE PERSONNEL.

LASER BEAM RADIATION SPOT



Laser Diode Properties
Material: Ga-Al-As
Wavelength: 755 – 815 nm (25°C)
Laser Output: Continuous Wave max.0.5 mW

ASSEMBLING THE UNIT

1. Turn the turntable spindle clockwise, until the non-serrate section of the drive gear is visible and positioned as pictured in the illustration (Figure 1).
2. Install the turntable drive belt (which is located on the turntable belt flange) onto the pulley. See "MOUNTING THE TURNTABLE DRIVE BELT"
   Make sure that the belt is not twisted.
3. Place the rubber mat onto the turntable platter (Figure 2).
4. Place the 45 rpm record adapter into the storage recess on the base (Figure 2).
5. Unfasten and remove the string or twist-tab wire that secures the tonearm during shipment.
6. Remove the stylus cover prior to playing a record (Figure 2).

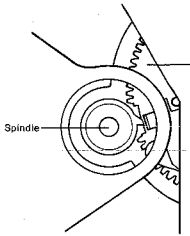


Figure 1

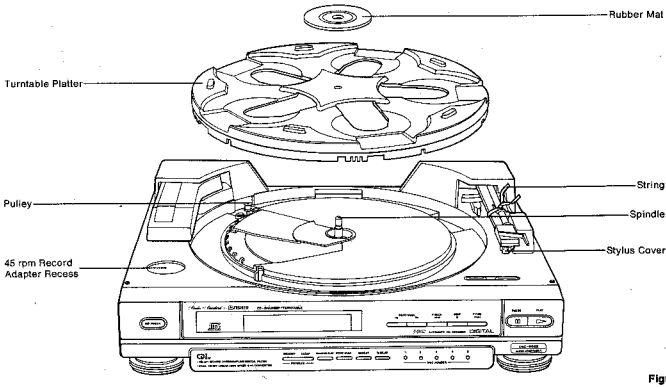


Figure 2

MOUNT THE TURNTABLE DRIVE BELT

IMPORTANT NOTES:

- Make sure your hands are clean and dry before you handle the turntable belt. If the belt gets wet or dirty it may slip during turntable operation.
- Make sure that the turntable drive belt lies flat in the center of the Turntable Belt Flange, and is not twisted (Figure 3).

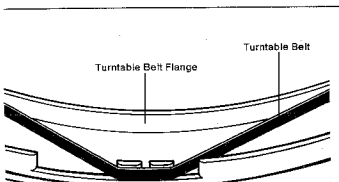


Figure 3

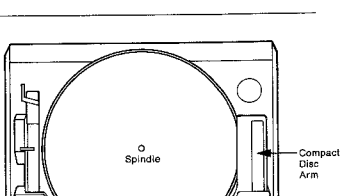


Figure 4

STEP 1

Turn the Turntable Platter upside down.
Place the Turntable Belt over the 2-prong Disc No. 2 Sensor, then turn the platter right side up.

STEP 2

Hold the Turntable Platter with the 2-prong Disc No. 2 Sensor over the Pulley.

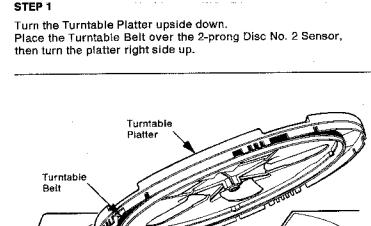


Figure 5

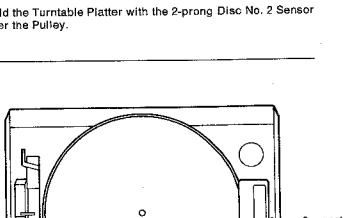


Figure 6

STEP 3

Tilt the Turntable Platter toward the Pulley and slide it under the Compact Disc Arm, then lay it down flat. – The hole in the middle of the platter fits over the spindle.

STEP 4

Gently rotate the Turntable Platter clockwise, until the 2-prong Disc No. 2 Sensor is visible through the window on the back of the unit.
Gently take the belt off of the 2-prong Disc No. 2 Sensor with your finger and let it go. The belt snaps into place on the Pulley.

If the turntable does not operate properly, remove the Turntable Platter and repeat steps 1 ~ 4.

DISASSEMBLY INSTRUCTIONS

GENERAL REMARKS

- Before disassembling the until, spread a soft rubber mat or a cloth on the workbench to avoid scratches and grease stains.
- Do not use a material which is likely to cause static electricity because transistors and ICs may be easily damaged by it.
- Reassemble the unit, noting the kinds of screws, the soldering and arrangement of the leads. Refer to "Circuit Diagram and Exploded Views" for correct assembly.
- Reassemble in reverse order.

ASSY CHASSIS CAM REMOVAL

1. Turn the unit over on a clean soft surface.
2. Remove the screws from the Plate Bottom and detach the Plate Bottom from the unit .
3. Remove the five screws (1 ~ 5) fastening the Assy Chassis Cam to the Cabinet Top.
4. Reassemble in reverse order.

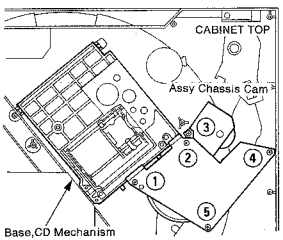


Figure 7

BASE, CD MECHANISM REMOVAL

1. Remove the Assy Chassis Cam by following the instructions for it.
2. Remove the screw (6) fastening the Base CD Mechanism.

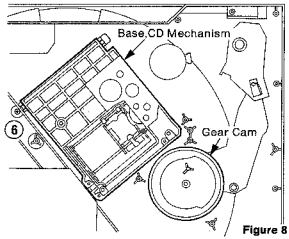


Figure 8

3. Remove the Base CD Mechanism taking out the movable boss from the up and down movable grove on the side of the Gear Cam.
4. Reassemble in reverse order.

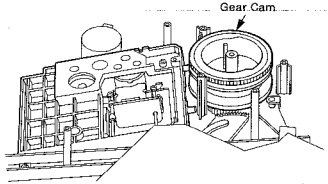
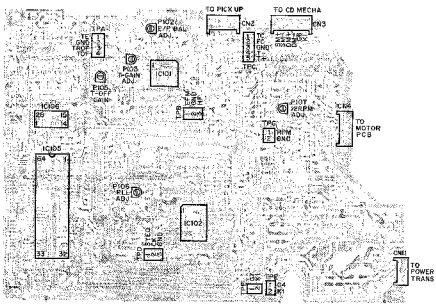


Figure 9

CD PLAYER ADJUSTMENT POINTS
(BOTTOM VIEW)



CD PLAYER ADJUSTMENT PROCEDURES

BEFORE CHECKING OR ADJUSTING CD PLAYER

1. Procedures for all adjustments for the CD player from start to finish are described below.
2. If no problems are found after each item is checked when the pick-up is replaced, there is no need to adjust all items again.

SETTING OF INITIAL POSITION OF VOLUME

1. Set the potentiometer to the initial positions listed below:

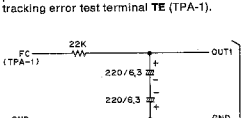
P102 (E/F BALANCE)	Mechanical Center
P103 (TRACKING GAIN)	Mechanical Center
P105 (TRACKING OFFSET)	Mechanical Center
P106 (FREE RUN FREQUENCY)	Mechanical Center
P107 (12 RPM ADJUST)	Mechanical Center

PLL (VCO) FREE RUN FREQUENCY ADJUSTMENT

1. Connect the frequency counter between the **VCO** test terminal **CK** (TPD-2) and to **GND**. (Use a 10:1 Probe)
2. Push the POWER button to switch the power on and push the STOP button.
3. Adjust the P106 until the frequency counter indicator reads 4.32MHz ~ 4.33MHz.

E/F BALANCE ADJUSTMENT

1. Short the both test terminal **TEST** (TPE) on the Main P.C.Board to the TEST mode.
2. Short the test terminal **TROF** (TPA-3) to **GND** to turn tracking servo OFF.
3. Place the test disc (Modern Wave Ⅱ) on the Disc Tray, and play the fourth item on the disc.
4. Connect a DC Voltmeter and an oscilloscope via the low pass filter like that shown in the illustration below to the tracking error test terminal **TE** (TPA-1).



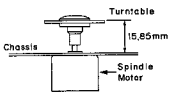
Measurement Circuit

5. Adjust the P102 so that the DC Voltmeter reading is 0V±50mV (oscilloscope waveform is symmetric to + and − about the zero level).

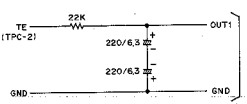
TURNTABLE HEIGHT ADJUSTMENT

This adjustment must be performed when the Spindle Motor is replaced.

1. The turntable should be mounted so that its upper surface is 15.85mm±0.1mm above the surface of the chassis.



2. Place the test disc (Modern Wave Ⅱ) on the turntable.
3. Connect a DC Voltmeter and an oscilloscope via the low-pass filter shown below to the focus coil test terminal **FC** (TPC-2).

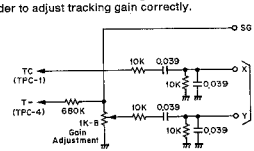


Measurement Circuit

4. Push the POWER button to switch the power on and PLAY the First and Last Track No. on the disc.
5. If the DC Voltmeter reading is not in the ranges 0V±0.2V for inner tracks and 0V±0.35V for outer tracks, then the turntable height must be readjusted. Raise the turntable higher if the DC Voltmeter indicator is on the plus (+) side, and lower it if it is on the minus (−) side.
(With this circuit 1V represents movement of approximately 0.55mm ~ 0.65mm.)

TRACKING GAIN ADJUSTMENT

The measurement circuit diagrammed below must be used in order to adjust tracking gain correctly.



Measurement Circuit

1. Apply P103 to the position of Mechanical center position, and place the test disc (Modern Wave Ⅱ) on the Disc Tray.
2. Connect the measurement circuit described in the last section to the tracking coil test terminal **TC** (TPC-1) and **T−** (TPC-4). (Use 680kΩ Resistor)
3. Push the POWER button to switch the power on and PLAY the first item on the test disc. Now apply a signal of 880Hz and 0.2Vp-p from the signal generator to the measurement circuit.

4. Set the oscilloscope to X-Y operation, and while observing the lissajous waveform adjust P103 to the point where the phase difference is 90° as shown in Figure 10 above.

NOTE:
If these two adjustments are performed, the TRACKING OFFSET must also be adjusted.

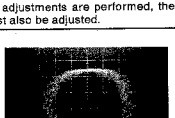


Figure 10

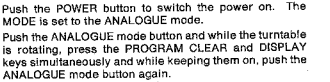
TRACKING OFFSET ADJUSTMENT

1. Push the POWER button to switch the power on and push the STOP button.
2. Connect a DC Voltmeter to the tracking coil test terminal **TC** (TPC-1) and short the test terminal **TOF** to **GND.**
3. In this condition check that the DC Voltmeter indicator is in the range 100mV±20mV, and adjust the P102 if it is not.

NOTE:
Perform this adjustment once again after adjusting the E/F BALANCE and TRACKING GAIN signals.

TURNTABLE 12 RPM ADJUSTMENT

1. Push the POWER button to switch the power on. The MODE is set to the ANALOGUE mode.
2. Push the ANALOGUE mode button and while the turntable is rotating, press the PROGRAM CLEAR and DISPLAY keys simultaneously and while keeping them on, push the ANALOGUE mode button again.
   Then push the SPEED select button.
   The display shows as follows.



3. Adjust the P107 so that the indicator on the right side of the display panel shows approx. 1370±20.

CONFIRMING HF LEVEL & 3T JITTER VALUE

If no jitter counter is available, this check does not have to be performed.

1. PLAY the fourth item on the test disc (Modern Wave Ⅱ).
2. Connect an oscilloscope to the test terminal **HF** (TPB-3) and check that its **HF** level is in the range 2.0Vp-p ~ 3.3Vp-p. (Use a 10:1 Probe)
3. Connect a jitter counter to test terminal **EFM** (TPB-1) and check that the 3T jitter value is less than 25ns. (Window width:600ns ~ 850ns, Set Level:2.5V)
4. Now PLAY the tenth item on the test disc and check that the jitter value is less than 25ns again.

CONFIRMING FOCUS OFFSET

1. Push the POWER button to switch the power on and push the STOP button.
2. Connect a DC Voltmeter to the test terminal **FC** (TPC-2) and to **GND.**
3. Next connect the test terminal **FOF** (D104 Cathode Side) to **GND.**
4. In this condition check that the DC Voltmeter indicator is in the range −0.4V ~ −1.0V.

CONFIRMING KICK GAIN

1. Place the test disc (Modern Wave Ⅱ) on the Disc Tray.
2. Set the oscilloscope to NORMAL TRIG., set the EXT. TRIG. pin to external trigger, and input the trigger from test terminal **TRHD** to the oscilloscope.
3. Next connect test terminal **HF** (TPB-3) pin to Channel 1 of the oscilloscope, and connect test terminal **TE** (TPA-1) to Channel 2.
4. Push the POWER button to switch the power on and PLAY the first item on the test disc, and the push the PAUSE button. Now observe the waveforms for **HF** and **TE** with triggers applied from test terminal **TRHD.** At this point, adjust (R281/R282) so that a kick pulse waveform of about 1 to 1.3 tracks as shown in Figure 11 below is obtained.

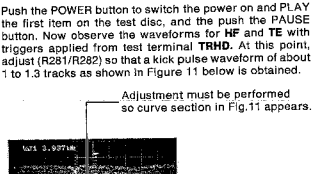


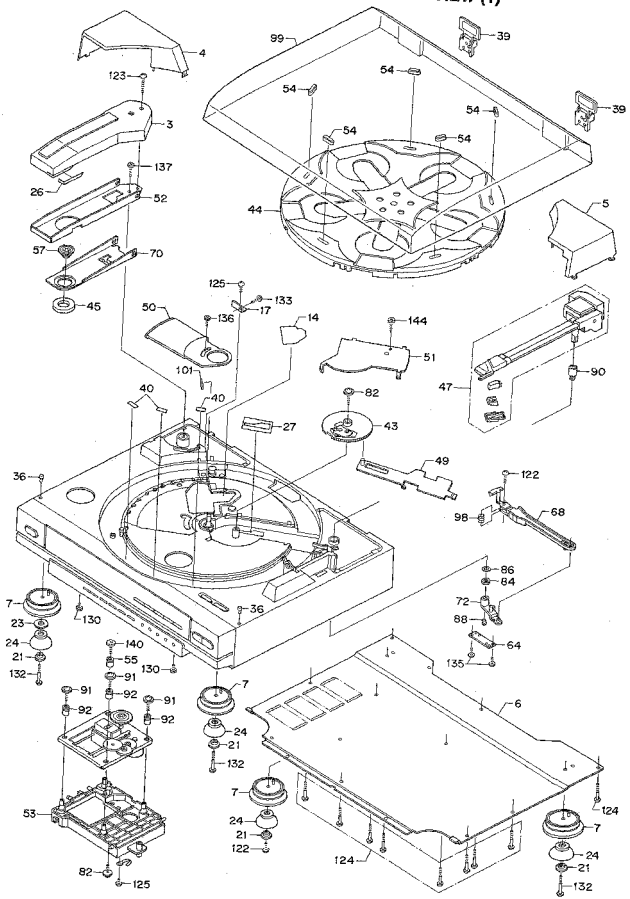
Figure 11

ERROR INDICATORS

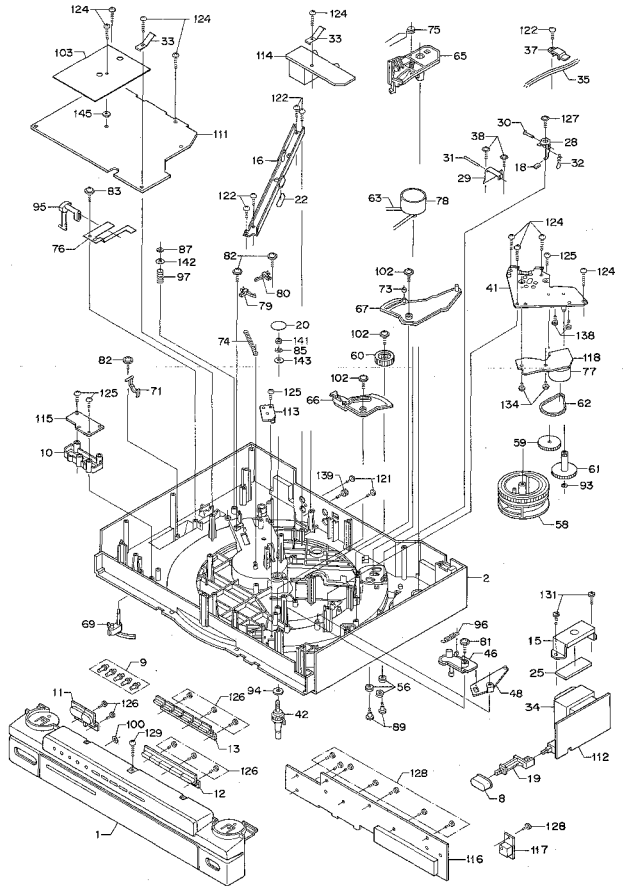
When the mechanism does not lower the tonearm caused by stopping the turntable or when the CD mechanism is stuck, ERROR "E-01" or "E-02" is shown. When the ERROR shows on the display, the unit is set in the mode described below. Therefore reset to the normal operating mode and then operate the unit.

1. "E-01"
   If the CD mechanism is stuck caused when replacing the CD in the CD mode, or when the CD-tray is jammed, "E-01" shows in the display after about 20 seconds and the motor for lowering the mechanism stops.
   Switch OFF the power, release the mechanism and operate the unit.
2. "E-02"
   If the turntable belt slides off and the turntable stops "E-02" shows on the display after about 20 seconds. The motor of the turntable stops. The mechanism operates both the turntable and CD-tray. Switch OFF the power install the turntable belt, and operate the unit.

CABINET & CHASSIS EXPLODED VIEW (1)



CABINET & CHASSIS EXPLODED VIEW (2)



CABINET & CHASSIS PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKAGE			
	620 210 1330	Outer Carton	1
	620 206 1380	Sheet	1
	620 210 2177	Sheet,Cushion,Lid	2
	620 205 8715	Pad,Front	1
	620 205 8722	Pad,Rear	1
	620 208 8637	Pad,Plain	1
	620 210 2191	Pad,Plain,Lid	2
	620 059 8596	Patching Sheet	1
	620 148 8616	Sheet Polyethylene	1
	620 148 9453	Poly Cover	1
	620 152 7452	Serial No. Sheet	3
ACCESSORIES			
	620 210 6335	Assy,Poly Cover	1
	620 209 2843	Remocon,RDAC-143	1
	620 210 6342	Instruction Manual	1
	620 152 2824	Certificate Card	1
	620 037 3500	RCA Cord 1000mm Black	1
or	620 021 7408	RCA Cord 1000mm Black	1
	620 037 3517	RCA Cord 1000mm Gray	1
or	620 021 7415	RCA Cord 1000mm Gray	1
	620 205 4083	Sheet,Turntable	1
	620 152 7452	Serial No. Sheet	1
	620 207 8948	Adaptor	1
	620 017 7955	Connector 4P Assy	1
	620 210 6359	Label,Barcode	1
	620 210 6472	Notice,T/T Belt	1
CABINET			
	620 210 1347	Rating Plate	1
	620 211 1346	Label,Safety (Laser)	1
	620 211 1353	Label,Safety (Laser)	1
	620 061 2418	Notes (Laser)	1
	620 125 8110	Lug	1
	620 125 8424	Wire Band	5
	620 116 4282	Adhesive Sheet	5
	620 125 8110	Lug	1
	620 207 0780	Assy,Connector-S,6P [WCN3]	1
	620 207 4054	Assy,Connector-S,4P [WCN6]	1
	620 210 8650	Assy,Connector-S,5P [WCN13]	1
	620 211 1452	Assy,Connector-P,Lug,1P [WCN15]	1
1	620 210 1323	Assy,Cabinet,Front	1
2	620 210 0692	Cabinet	1
3	620 205 0478	Cover,Flap	1
4	620 205 0492	Cover,Decorate Flap	1
5	620 206 0553	Cover,Torn Arm	1
6	620 205 0263	Plate,Bottom	1
7	620 196 6114	Decoration,Leg	4
8	620 198 0622	Button,Power	1
9	620 198 1476	Button,Small	5
10	620 205 0218	Button,Select	1
11	620 208 9788	Button,Play/Pause	1
12	620 205 0232	Button,Function	1
13	620 205 0249	Button,Mode	1
14	620 208 0635	Veil,CD Mech	1
15	620 205 4124	Bracket-E,Trans	1
16	620 207 4030	Bracket-M,Cabinet	1
17	620 207 4047	Bracket-M,Screw	1
18	620 207 6676	Cap,Lever Fix	1
19	620 205 0188	Joint	1
20	620 208 2523	Insulator,Shaft	4
21	620 205 3813	Spacer,Leg	4
22	620 208 0642	Spacer,Bracket,Cabinet	1
23	620 208 0710	Spacer,Leg	1
24	620 197 7097	Cushion,Rubber	4
25	620 205 8080	Cushion,Rubber,Trans	1
26	620 207 1008	Cushion,Rubber,Flap	1
27	620 207 5921	Sheet,Tonearm	1
28	620 207 5880	Lever,Fix Turntable	1
29	620 207 5877	Lever,CD Play	1
30	620 207 5884	Pin,Lever Fix Turntable	1
31	620 207 5891	Pin,Lever Play CD	1
32	620 207 6669	Spring,Tens,Lever Fix	1
33	620 211 0127	Spring,Plate,Grand	2
34	⚠ 620 210 4003	Power Trans,SEV 15VA	1
35	⚠ 620 023 7550	Power Cord	1
36	620 047 6514	Pad I,d	2
37	620 050 3693	Cramp Wire	1

Ref. No.	Part No.	Description	Q'ty
38	620 051 3746	Screw 3X10	2
39	620 033 7359	Hinge Assy	2
40	620 124 6322	Cushion Motor	3
41	620 206 7629	Assy,Chassis Cam	1
42	620 206 7586	Assy,Shaft,TT	1
43	620 206 7572	Assy,Gear,Cycling	1
44	620 205 8366	Assy,Turntable	1
45	620 208 0741	Assy,Magnet	1
46	620 206 7650	Assy,Arm Lock	1
47	620 206 7643	Assy,Tonearm	1
48	620 206 7667	Assy,Lever Lock	1
49	620 206 7636	Assy,Plate,Drive	1
50	620 205 0485	Cover,CD Mech	1
51	620 205 0638	Cover,Gear Cam	1
52	620 205 0384	Bracket-M,Flap	1
53	620 206 4353	Base,CD Mechanism	1
54	620 205 4058	Spacer,Rubber	5
55	620 207 6638	Cushion,Rubber	1
56	620 207 7628	Cushion,Rubber	3
57	620 208 0734	Holder,Disk	1
58	620 205 0508	Gear,Cam	1
59	620 205 0515	Gear,Fast	1
60	620 205 0522	Gear,Idler	1
61	620 205 0560	Pulley,Gear	1
62	620 205 6029	Belt,Square,Drive	1
63	620 205 8005	Belt,Turntable	1
64	620 205 2519	Thrust,Arm	1
65	620 205 0423	Arm,Flap	1
66	620 205 0430	Arm,Gear Cover	1
67	620 205 0447	Arm,Gear Flap	1
68	620 205 2434	Arm,Return	1
69	620 205 2496	Lifter,Arm	1
70	620 206 0614	Lever,Flap	1
71	620 206 2441	Lever,Tonearm Lock	1
72	620 205 2468	Lever,Pickup	1
73	620 206 7841	Roller	1
74	620 207 8526	Spring,Tens,Plate Drive	1
75	620 206 7834	Spring,Tors,Arm Flap	1
76	620 205 2533	Spring,Plate	1
77	620 206 6967	Motor,12V,0.5W	1
78	620 207 5471	Motor,12V,1W	1
79	620 207 5969	Switch,Leaf	1
80	620 207 5978	Switch,Leaf	1
81	620 051 3760	Screw 3.0X8 Sems	1
82	620 051 4316	Screw 3X10	5
83	620 051 4347	Screw 3X16	1
84	620 051 4941	Nut	1
85	620 051 5894	Washer	1
86	620 051 5965	Washer	1
87	620 052 1475	Ring Snap	1
88	620 064 1876	Support Shaft	1
89	620 054 5680	Screw	2
90	620 119 7228	Spacer	1
91	620 123 1021	Screw Braz. HD. +M2.6X14	3
92	620 124 3376	Cushion Rubber	3
93	620 123 3351	Washer M2.1X4.5X0.3	1
94	620 125 6031	Washer 4.2X12X1T	1
95	620 131 8548	Lever Cueing	1
96	620 206 7510	Spring,Tens,Arm Lock	1
97	620 139 3736	Spring	1
98	620 139 3842	Spring	1
99	620 206 7209	Lid	1
100	620 125 2392	Washer M2.6X4.7X0.25	1
101	620 209 6838	Cushion,Rubber	1
102	620 051 3708	Screw Braz. HD. +M3X8	3
103	620 211 1377	Shield,Plate	1
111	620 210 8797	Assy,PCB,Main	1
112	620 210 4096	Assy,PCB,Power	1
113	620 207 0155	Assy,PCB,Sensor	1
114	620 210 8605	Assy,PCB,Rear	1
115	620 207 0179	Assy,PCB,Tact Switch	1
116	620 207 0186	Assy,PCB,Display	1
117	620 207 0193	Assy,PCB,REM	1
118	620 207 0209	Assy,PCB,Motor	1
121	411 099 9506	SCR S-TPG BRZ 3X10	2
122	411 020 6208	SCR S-TPG BRZ 3X12	6
123	411 020 7007	SCR S-TPG BRZ 3X20	1

CABINET & CHASSIS PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
124	411 020 7304	SCR S-TPG BRZ 3X30	18
125	411 020 8004	SCR S-TPG BRZ 3X8	6
126	411 021 0609	SCR S-TPG BIN 2X6	8
127	411 021 1202	SCR S-TPG BIN 2X8	1
128	411 021 2704	SCR S-TPG BIN 2.6X6	8
129	411 137 3602	SCR S-TPG BIN 3X30	1
130	411 021 5903	SCR S-TPG BIN 3X8	2
131	411 021 6801	SCR S-TPG BIN 3.5X10	2
132	411 023 7805	SCR S-TPG PAN 3X40 [S4]	3
133	411 002 6509	SCR PAN 3X12	1
134	411 020 5508	SCR S-TPG BRZ 2.6X6	2
135	411 020 5904	SCR S-TPG BRZ 3X10	2
136	411 021 3206	SCR S-TPG BIN 2.6X8	1
137	411 022 3007	SCR S-TPG FLT 3X12	1
138	411 031 0103	SCR BIN 2.6X3	2
139	412 037 2009	SPECIAL SCREW	1
140	412 034 8700	SPECIAL SCREW	1
141	411 004 6408	NUT HEX 4	1
142	411 008 8705	WASHER Z 3.2X10X0.5	1
143	411 008 9603	WASHER Z 4.2X10X0.5	1
144	411 021 6603	SCR S-TPG BIN 3X8	1
145	411 090 5804	WASHER Y 3.1X8X1	1

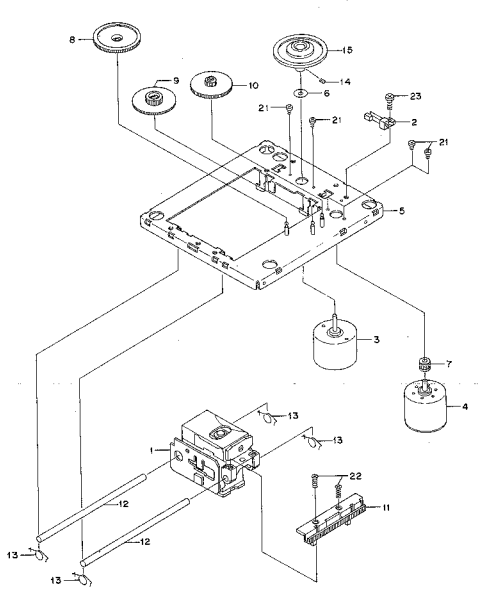
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CD MECHANISM EXPLODED VIEW



CD MECHANISM PARTS LIST

Ref. No.	Part No.	Description	Q'ty
CD MECHANISM			
1	620 201 5774	Assy,Pickup,Laser,90	1
2	620 015 8633	Leaf Switch (Inner SW)	1
3	620 189 0433	Motor (Spindle)	1
4	620 190 1702	Motor (Feed)	1
5	620 183 4819	Chassis Assy	1
6	620 125 1487	Washer M1.9X7.0X0.25	1
7	620 127 7814	Gear Motor	1
8	620 127 9542	Gear Pinion	1
9	620 127 9552	Gear Load B	1
10	620 127 9586	Gear Load S	1
11	620 127 9573	Gear Rack	1
12	620 133 4159	Shaft Pickup	2
13	620 196 2697	Spring,Torsion	4
14	620 123 0116	Set Screw V-Cone 2X4	1
15	620 082 7478	Turntable Assy	1
or	620 126 4050	Turntable	1

Ref. No.	Part No.	Description	Q'ty
21	411 019 9302	SCR PAN PCS 1.7X2.5	4
22	411 129 0800	SCR FLT PCS 2X5	2
23	411 107 6404	SCR S-TPG PAN 2.5X6	1

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty
ASSY,PCB,MAIN			
111	620 210 8797	Assy,PCB,Main	1
	620 211 1483	Coil,Air,Inductor	1
	620 053 8562	Plate Heat Sink	1
	620 053 7247	Plate Heat Sink	1
	620 053 9258	Plate Heat Sink	1
CN1	620 021 8436	Plug 6P (Pickup)	1
CN2	620 207 0582	Plug,6P (Pickup)	1
CN3	620 021 6579	Plug 6P (Mechanism)	1
CN4	620 021 8443	Plug 8P (Motor P.C.B.)	1
CN6	620 021 9792	Plug 4P (Arm Switch)	1
CN7	620 201 0373	Socket,Holder,3P	1
CN8	620 201 0373	Socket,Holder,3P	1
CN9	620 022 1214	Plug 11P (Display P.C.B.)	1
CN10	620 197 4362	Plug,14P (Display P.C.B.)	1
CN11	620 021 9436	Plug 6P (Power Switch)	1
CN12	620 021 9419	Plug 3P (Remocon P.C.B.)	1
CN13	620 022 0480	Plug 5P	1
P102	620 006 1353	Potentiometer 100KB	1
P103	620 006 1360	Potentiometer 22KB	1
P105	620 006 1360	Potentiometer 22KB	1
P106	620 006 1360	Potentiometer 22KB	1
P107	620 006 1360	Potentiometer 22KB	1
RB101	620 004 5438	Resistor 8X10K J	1
RB102	620 004 5436	Resistor 8X10K J	1
X101	620 007 3288	Crystal 16.9344MHz	1
X102	620 189 5117	Ceramic OSC 6MHz	1
IC101	409 124 6507	IC LA9200NM	1
IC102	409 222 5105	IC YM7121B	1
IC103	409 136 9206	IC FA5205P	1
IC104	409 018 5500	IC LA6510	1
IC105	409 237 8009	IC M50957-242SP	1
IC106	409 206 9006	IC LC97000P-288	1
or	409 199 2107	IC LC97000A-288	1
IC107	409 018 5104	IC LA6458SS	1
IC108	409 018 5104	IC LA6458SS	1
IC109	409 050 0501	IC TA78L006AP	1
IC110	409 138 9503	IC TA79L006P	1
IC111	409 169 7904	IC NJM79M05FA	1
Q101	405 019 2807	TR 2SC536-F-SPA-AC	1
or	405 019 3903	TR 2SC536-G-SPA-AC	1
Q102	405 018 2600	TR 2SC3400-AC	1
Q103	405 019 2807	TR 2SC536-F-SPA-AC	1
or	405 019 3903	TR 2SC536-G-SPA-AC	1
Q104	405 004 4007	TR 2SA608-E-SPA-AC	1
or	405 004 4601	TR 2SA608-F-SPA-AC	1
Q105	405 018 2600	TR 2SC3400-AC	1
Q106	405 021 0204	TR 2SD1012-F-SPA-AC	1
or	405 021 0600	TR 2SD1012-G-SPA-AC	1
Q107	405 019 2807	TR 2SC536-F-SPA-AC	1
Q108	405 019 2807	TR 2SC536-F-SPA-AC	1
or	405 019 3903	TR 2SC536-G-SPA-AC	1
Q109	405 018 2600	TR 2SC3400-AC	1
Q110	405 018 2600	TR 2SC3400-AC	1
Q111	405 004 4007	TR 2SA608-E-SPA-AC	1
or	405 004 4601	TR 2SA608-F-SPA-AC	1
Q112	405 019 2807	TR 2SC536-F-SPA-AC	1
or	405 019 3903	TR 2SC536-G-SPA-AC	1
Q113	405 018 2600	TR 2SC3400-AC	1
Q114	405 021 0204	TR 2SD1012-F-SPA-AC	1
or	405 021 0600	TR 2SD1012-G-SPA-AC	1
Q115	405 021 0204	TR 2SD1012-F-SPA-AC	1
or	405 021 0600	TR 2SD1012-G-SPA-AC	1
D101	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D102	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D103	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D104	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D105	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D107	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D108	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D109	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1

Ref. No.	Part No.	Description	Q'ty
D110	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D111	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D112	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D113	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D114	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D115	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D116	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D117	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D118	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D119	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D120	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D121	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D122	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D123	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D124	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D125	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D130	407 051 7604	ZENER DIODE GZS6.8Z-BT	1
or	407 053 7909	ZENER DIODE MTZ7.5A	1
D131	407 051 5303	ZENER DIODE GZS24Z-BT	1
D132	407 065 8000	ZENER DIODE GZS4.7X	1
D133	407 140 7201	DIODE DSR10C-ET5	1
or	407 005 8602	DIODE ERA15-02	1
D134	407 140 7201	DIODE DSR10C-ET5	1
or	407 005 8602	DIODE ERA15-02	1
D135	407 140 7201	DIODE DSR10C-ET5	1
or	407 005 8602	DIODE ERA15-02	1
D136	407 140 7201	DIODE DSR10C-ET5	1
or	407 005 8602	DIODE ERA15-02	1
D137	407 140 7201	DIODE DSR10C-ET5	1
or	407 005 8602	DIODE ERA15-02	1
D138	407 140 7201	DIODE DSR10C-ET5	1
or	407 005 8602	DIODE ERA15-02	1
C101	403 009 1809	CERAMIC 10P J 50V	1
C102	403 016 2004	CERAMIC 2.2P K 50V	1
C103	403 050 6309	CERAMIC 68P J 50V	1
C104	403 050 6309	CERAMIC 68P J 50V	1
C105	403 071 2001	CERAMIC 180P K 50V	1
C106	403 048 7701	ELECT 0.47U M 50V	1
C107	403 001 1906	CERAMIC 0.01U M 16V	1
C109	403 048 7701	ELECT 0.47U M 50V	1
C110	403 121 9509	CERAMIC 0.1U Z 50V	1
C111	403 057 3107	POLYESTER 0.1U K 50V	1
or	403 166 5603	MT-POLYEST 0.1U K 50V	1
or	403 057 3503	POLYESTER 0.1U K 50V	1
C112	403 060 8700	POLYESTER 0.033U K 50V	1
or	403 060 8601	POLYESTER 0.033U K 50V	1
C113	403 121 9509	CERAMIC 0.1U Z 50V	1
C114	403 039 3002	ELECT 47U M 6.3V	1
C115	403 039 3002	ELECT 47U M 6.3V	1
C116	403 022 7703	CERAMIC 33P J 50V	1
C117	403 022 7703	CERAMIC 33P J 50V	1
C118	403 001 1906	CERAMIC 0.01U M 16V	1
C119	403 001 1906	CERAMIC 0.01U M 16V	1
C120	403 089 1207	CERAMIC 1000P K 50V	1
C121	403 058 5407	POLYESTER 0.15U K 50V	1
or	403 167 9709	MT-POLYEST 0.15U K 50V	1
or	403 066 5704	POLYESTER 0.15U K 50V	1
C122	403 086 1402	NP-ELECT 0.22U M 50V	1
C123	403 086 1600	NP-ELECT 0.33U M 50V	1
C130	403 158 3501	NP-ELECT 0.47U M 50V	1
or	403 086 1907	NP-ELECT 0.47U M 50V	1
C131	403 039 3002	ELECT 47U M 6.3V	1
C132	403 049 1708	ELECT 1U M 50V	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
C133	403 042 0401	ELECT	10U	M	16V	1
C134	403 073 7004	CERAMIC	470P	K	50V	1
C136	403 057 3107	POLYESTER	0.1U	K	50V	1
or	403 166 5603	MT-POLYEST	0.1U	K	50V	1
or	403 057 3503	POLYESTER	0.1U	K	50V	1
C137	403 063 2309	POLYESTER	0.068U	K	50V	1
or	403 166 0309	MT-POLYEST	0.068U	K	50V	1
or	403 063 2507	POLYESTER	0.068U	K	50V	1
C138	403 009 1809	CERAMIC	10P	J	50V	1
C139	403 071 6207	CERAMIC	220P	K	50V	1
C140	403 121 9509	CERAMIC	0.1U	Z	50V	1
C141	403 121 9509	CERAMIC	0.1U	Z	50V	1
C142	403 042 0401	ELECT	10U	M	16V	1
C143	403 042 0401	ELECT	10U	M	16V	1
C145	403 159 7201	NP-ELECT	1U	M	50V	1
or	403 086 2706	NP-ELECT	1U	M	50V	1
C146	403 159 7201	NP-ELECT	1U	M	50V	1
or	403 086 2706	NP-ELECT	1U	M	50V	1
C147	403 071 7501	CERAMIC	2200P	K	50V	1
C148	403 071 7501	CERAMIC	2200P	K	50V	1
C149	403 002 6207	CERAMIC	0.012U	K	25V	1
C150	403 002 6207	CERAMIC	0.012U	K	25V	1
C151	403 121 9509	CERAMIC	0.1U	Z	50V	1
C152	403 001 1906	CERAMIC	0.01U	M	16V	1
C153	403 038 7209	ELECT	220U	M	6.3V	1
C154	403 042 0401	ELECT	10U	M	16V	1
C159	403 009 1207	CERAMIC	1000P	K	50V	1
C160	403 042 0401	ELECT	10U	M	16V	1
C161	403 042 0401	ELECT	10U	M	16V	1
C162	403 159 7201	NP-ELECT	1U	M	50V	1
or	403 086 2706	NP-ELECT	1U	M	50V	1
C163	403 159 7201	NP-ELECT	1U	M	50V	1
or	403 086 2706	NP-ELECT	1U	M	50V	1
C164	403 069 1207	CERAMIC	1000P	K	50V	1
C165	403 069 1207	CERAMIC	1000P	K	50V	1
C166	403 069 1207	CERAMIC	1000P	K	50V	1
C170	403 042 0401	ELECT	10U	M	16V	1
C171	403 058 5407	POLYESTER	0.15U	K	50V	1
or	403 167 9709	MT-POLYEST	0.15U	K	50V	1
or	403 058 5704	POLYESTER	0.15U	K	50V	1
C172	403 042 0401	ELECT	10U	M	16V	1
C173	403 001 1906	CERAMIC	0.01U	M	16V	1
C174	403 088 6207	STYRENE	560P	K	50V	1
C175	403 058 5407	POLYESTER	0.15U	K	50V	1
or	403 167 9709	MT-POLYEST	0.15U	K	50V	1
or	403 058 5704	POLYESTER	0.15U	K	50V	1
C176	403 059 0401	POLYESTER	0.018U	K	50V	1
or	403 059 0302	POLYESTER	0.018U	K	50V	1
C177	403 047 9706	ELECT	0.1U	M	50V	1
C178	403 042 0401	ELECT	10U	M	16V	1
C179	403 042 0401	ELECT	10U	M	16V	1
C180	403 049 1708	ELECT	1U	M	50V	1
C181	403 010 7807	CERAMIC	12P	J	50V	1
C182	403 010 7807	CERAMIC	12P	J	50V	1
C183	403 121 9509	CERAMIC	0.1U	Z	50V	1
C184	403 021 7308	CERAMIC	3.3P	K	50V	1
C185	403 121 9509	CERAMIC	0.1U	Z	50V	1
C190	403 039 3002	ELECT	47U	M	6.3V	1
C191	403 121 9509	CERAMIC	0.1U	Z	50V	1
C192	403 068 9402	CERAMIC	100P	K	50V	1
C193	403 001 1906	CERAMIC	0.01U	M	16V	1
C194	403 049 1708	ELECT	1U	M	50V	1
C195	403 073 7004	CERAMIC	470P	K	50V	1
C196	403 159 7201	NP-ELECT	1U	M	50V	1
or	403 086 2706	NP-ELECT	1U	M	50V	1
C200	403 121 9509	CERAMIC	0.1U	Z	50V	1
C201	403 039 3002	ELECT	47U	M	6.3V	1
C204	403 001 1906	CERAMIC	0.01U	M	16V	1
C205	403 121 9509	CERAMIC	0.1U	Z	50V	1
C206	403 038 7209	ELECT	220U	M	6.3V	1
C207	403 121 9509	CERAMIC	0.1U	Z	50V	1
C208	403 039 3002	ELECT	47U	M	6.3V	1
C209	403 121 9509	CERAMIC	0.1U	Z	50V	1
C210	403 039 3002	ELECT	47U	M	6.3V	1
C211	403 042 9107	ELECT	22U	M	16V	1
C212	403 042 9107	ELECT	22U	M	16V	1
C213	403 057 0908	POLYESTER	0.01U	K	50V	1
or	403 057 0809	POLYESTER	0.01U	K	50V	1
C214	403 057 0908	POLYESTER	0.01U	K	50V	1
or	403 057 0809	POLYESTER	0.01U	K	50V	1
C215	403 058 1607	POLYESTER	1500P	K	50V	1
or	403 058 1508	POLYESTER	1500P	K	50V	1
C216	403 058 1607	POLYESTER	1500P	K	50V	1
or	403 058 1508	POLYESTER	1500P	K	50V	1
C217	403 159 7201	NP-ELECT	1U	M	50V	1
or	403 086 2706	NP-ELECT	1U	M	50V	1
C218	403 159 7201	NP-ELECT	1U	M	50V	1
or	403 086 2706	NP-ELECT	1U	M	50V	1
C219	403 069 1207	CERAMIC	1000P	K	50V	1
C220	403 069 1207	CERAMIC	1000P	K	50V	1
C221	403 069 1207	CERAMIC	1000P	K	50V	1
C222	403 069 1207	CERAMIC	1000P	K	50V	1
C223	403 069 1207	CERAMIC	1000P	K	50V	1
C230	403 038 7209	ELECT	220U	M	6.3V	1
C231	403 001 1906	CERAMIC	0.01U	M	16V	1
C232	403 042 0401	ELECT	10U	M	16V	1
C233	403 121 9509	CERAMIC	0.1U	Z	50V	1
C234	403 121 9509	CERAMIC	0.1U	Z	50V	1
C235	403 121 9509	CERAMIC	0.1U	Z	50V	1
C236	403 039 3002	ELECT	47U	M	6.3V	1
C237	403 039 3002	ELECT	47U	M	6.3V	1
C238	403 039 3002	ELECT	47U	M	6.3V	1
C239	403 042 0401	ELECT	10U	M	16V	1
C240	403 042 0401	ELECT	10U	M	16V	1
C241	403 042 0401	ELECT	10U	M	16V	1
C242	403 043 3104	ELECT	2200U	M	16V	1
C243	403 043 3104	ELECT	2200U	M	16V	1
C244	403 052 8107	ELECT	100U	M	35V	1
C245	403 052 8107	ELECT	100U	M	35V	1
C246	403 054 1304	ELECT	47U	M	35V	1
C247	403 072 2703	CERAMIC	0.022U	Z	50V	1
C248	403 072 2703	CERAMIC	0.022U	Z	50V	1
C249	403 072 2703	CERAMIC	0.022U	Z	50V	1
C253	403 121 9509	CERAMIC	0.1U	Z	50V	1
C254	403 121 9509	CERAMIC	0.1U	Z	50V	1
C255	403 121 9509	CERAMIC	0.1U	Z	50V	1
C257	403 003 2802	CERAMIC	0.022U	K	25V	1
C258	403 003 2802	CERAMIC	0.022U	K	25V	1
C259	403 003 2802	CERAMIC	0.022U	K	25V	1
C260	403 007 8503	CERAMIC	1.5P	M	50V	1
C261	403 007 8503	CERAMIC	1.5P	M	50V	1
R101	401 025 8208	CARBON	22K	JA	1/6W	1
R102	401 025 1902	CARBON	15K	JA	1/6W	1
R103	401 024 7400	CARBON	10K	JA	1/6W	1
R104	401 027 2600	CARBON	5.6K	JA	1/6W	1
R105	401 025 7409	CARBON	220	JA	1/6W	1
R106	401 025 2503	CARBON	1.5M	JA	1/6W	1
R107	401 025 1902	CARBON	15K	JA	1/6W	1
R108	401 027 9005	CARBON	82K	JA	1/6W	1
R109	401 027 9005	CARBON	82K	JA	1/6W	1
R110	401 024 7004	CARBON	1K	JA	1/6W	1
R111	401 024 7400	CARBON	10K	JA	1/6W	1
R112	401 027 5502	CARBON	6.8K	JA	1/6W	1
R113	401 027 5502	CARBON	6.8K	JA	1/6W	1
R114	401 024 7400	CARBON	10K	JA	1/6W	1
R115	401 025 2305	CARBON	150K	JA	1/6W	1
R116	401 024 7707	CARBON	100K	JA	1/6W	1
R117	401 024 7004	CARBON	1K	JA	1/6W	1
R118	401 025 7805	CARBON	2.2K	JA	1/6W	1
R119	401 025 8703	CARBON	220K	JA	1/6W	1
R120	401 026 0607	CARBON	270	JA	1/6W	1
R121	401 024 9701	CARBON	12K	JA	1/6W	1
R122	401 026 7408	CARBON	39K	JA	1/6W	1
R123	401 026 7408	CARBON	39K	JA	1/6W	1
R124	401 025 1902	CARBON	15K	JA	1/6W	1
R125	401 026 1307	CARBON	27K	JA	1/6W	1
R126	401 025 8703	CARBON	220K	JA	1/6W	1
R127	401 024 7400	CARBON	10K	JA	1/6W	1
R128	401 027 8602	CARBON	8.2K	JA	1/6W	1
R129	401 026 9907	CARBON	4.7K	JA	1/6W	1
R130	401 025 8208	CARBON	22K	JA	1/6W	1
R131	401 027 2600	CARBON	5.6K	JA	1/6W	1
R132	401 024 7707	CARBON	100K	JA	1/6W	1
R133	401 026 1604	CARBON	270K	JA	1/6W	1
R134	401 026 1604	CARBON	270K	JA	1/6W	1
R135	401 027 0309	CARBON	47K	JA	1/6W	1
R136	401 025 0004	CARBON	120K	JA	1/6W	1
R137	401 025 4606	CARBON	18K	JA	1/6W	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description		Q'ty
R138	401 026 4605	CARBON	33K JA 1/6W	1
R139	401 024 6700	CARBON	100 JA 1/6W	1
R140	401 025 1605	CARBON	1.5K JA 1/6W	1
R141	401 027 0309	CARBON	47K JA 1/6W	1
R142	401 026 1604	CARBON	270K JA 1/6W	1
R143	401 027 0309	CARBON	47K JA 1/6W	1
R144	401 024 9305	CARBON	1.2K JA 1/6W	1
R145	401 025 8206	CARBON	22K JA 1/6W	1
R146	401 026 1307	CARBON	27K JA 1/6W	1
R147	401 026 4902	CARBON	330K JA 1/6W	1
R148	401 024 9701	CARBON	12K JA 1/6W	1
R149	401 024 6403	CARBON	10 JA 1/6W	1
R150	401 024 6403	CARBON	10 JA 1/6W	1
R151	401 026 7606	CARBON	390K JA 1/6W	1
R152	401 026 4902	CARBON	330K JA 1/6W	1
R153	401 025 8703	CARBON	220K JA 1/6W	1
R154	401 025 8703	CARBON	220K JA 1/6W	1
R155	401 025 2305	CARBON	150K JA 1/6W	1
R156	401 024 7400	CARBON	10K JA 1/6W	1
R157	401 024 7400	CARBON	10K JA 1/6W	1
R158	401 025 7805	CARBON	2.2K JA 1/6W	1
R159	401 027 8602	CARBON	8.2K JA 1/6W	1
R160	401 024 7400	CARBON	10K JA 1/6W	1
R161	401 025 5405	CARBON	2.2 JA 1/6W	1
R162	401 025 5405	CARBON	2.2 JA 1/6W	1
R163	401 026 1307	CARBON	27K JA 1/6W	1
R164	401 025 7805	CARBON	2.2K JA 1/6W	1
R165	401 026 1307	CARBON	27K JA 1/6W	1
R166	401 027 3003	CARBON	56K JA 1/6W	1
R167	401 027 3201	CARBON	560K JA 1/6W	1
R168	401 027 3201	CARBON	560K JA 1/6W	1
R169	401 024 7707	CARBON	100K JA 1/6W	1
R170	401 024 7707	CARBON	100K JA 1/6W	1
R171	401 024 7707	CARBON	100K JA 1/6W	1
R172	401 024 7707	CARBON	100K JA 1/6W	1
R173	401 024 6403	CARBON	10 JA 1/6W	1
R174	401 025 5405	CARBON	2.2 JA 1/6W	1
R175	401 025 3807	CARBON	180 JA 1/6W	1
R176	401 025 8236	CARBON	22K JA 1/6W	1
R177	401 024 7400	CARBON	10K JA 1/6W	1
R178	401 025 8208	CARBON	22K JA 1/6W	1
R180	401 025 4903	CARBON	160K JA 1/6W	1
R181	401 025 8703	CARBON	220K JA 1/6W	1
R182	401 024 9701	CARBON	12K JA 1/6W	1
R183	401 024 9701	CARBON	12K JA 1/6W	1
R184	401 025 4200	CARBON	1.8K JA 1/6W	1
R185	401 025 7409	CARBON	220 JA 1/6W	1
R186	401 024 5606	CARBON	1 JA 1/6W	1
R187	401 025 5405	CARBON	2.2 JA 1/6W	1
R188	401 025 5405	CARBON	2.2 JA 1/6W	1
R189	401 025 4200	CARBON	1.8K JA 1/6W	1
R190	401 024 6308	CARBON	110 JA 1/6W	1
R191	401 024 5606	CARBON	1 JA 1/6W	1
R192	401 024 9701	CARBON	12K JA 1/6W	1
R193	401 024 9701	CARBON	12K JA 1/6W	1
R194	401 027 9005	CARBON	82K JA 1/6W	1
R195	401 028 0308	CARBON	91K JA 1/6W	1
R196	401 025 4606	CARBON	18K JA 1/6W	1
R197	401 026 9907	CARBON	4.7K JA 1/6W	1
R200	401 024 7004	CARBON	1K JA 1/6W	1
R201	401 024 6700	CARBON	100 JA 1/6W	1
R202	401 026 9907	CARBON	4.7K JA 1/6W	1
R203	401 026 9907	CARBON	4.7K JA 1/6W	1
R204	401 025 8208	CARBON	22K JA 1/6W	1
R205	401 025 2305	CARBON	150K JA 1/6W	1
R206	401 026 7003	CARBON	3.9K JA 1/6W	1
R207	401 024 8001	CARBON	1M JA 1/6W	1
R208	401 026 7002	CARBON	3.9K JA 1/6W	1
R209	401 025 8208	CARBON	22K JA 1/6W	1
R210	401 025 8208	CARBON	22K JA 1/6W	1
R211	401 025 7406	CARBON	220 JA 1/6W	1
R212	401 026 1000	CARBON	2.7K JA 1/6W	1
R213	401 024 7400	CARBON	10K JA 1/6W	1
R214	401 024 8001	CARBON	1M JA 1/6W	1
R215	401 026 9907	CARBON	4.7K JA 1/6W	1
R216	401 027 4804	CARBON	62K JA 1/6W	1
R217	401 026 9600	CARBON	470 JA 1/6W	1
R220	401 025 8208	CARBON	22K JA 1/6W	1
R221	401 025 8208	CARBON	22K JA 1/6W	1

Ref. No.	Part No.	Description		Q'ty
R222	401 025 8208	CARBON	22K JA 1/6W	1
R223	401 025 8208	CARBON	22K JA 1/6W	1
R224	401 024 8001	CARBON	1M JA 1/6W	1
R225	401 024 7400	CARBON	10K JA 1/6W	1
R231	401 027 2303	CARBON	560 JA 1/6W	1
R232	401 027 2303	CARBON	560 JA 1/6W	1
R233	401 027 2303	CARBON	560 JA 1/6W	1
R234	401 024 7004	CARBON	1K JA 1/6W	1
R235	401 027 0309	CARBON	47K JA 1/6W	1
R236	401 024 7004	CARBON	1K JA 1/6W	1
R237	401 024 6700	CARBON	100 JA 1/6W	1
R238	401 024 6700	CARBON	100 JA 1/6W	1
R239	401 025 0608	CARBON	1.3K JA 1/6W	1
R240	401 025 0608	CARBON	1.3K JA 1/6W	1
R241	401 027 8305	CARBON	820 JA 1/6W	1
R242	401 027 8305	CARBON	820 JA 1/6W	1
R243	401 025 4200	CARBON	1.8K JA 1/6W	1
R244	401 025 4200	CARBON	1.8K JA 1/6W	1
R245	401 024 7707	CARBON	100K JA 1/6W	1
R246	401 024 7707	CARBON	100K JA 1/6W	1
R247	401 024 7004	CARBON	1K JA 1/6W	1
R248	401 024 7004	CARBON	1K JA 1/6W	1
R249	401 027 5502	CARBON	6.8K JA 1/6W	1
R250	401 027 5502	CARBON	6.8K JA 1/6W	1
R251	401 026 4605	CARBON	33K JA 1/6W	1
R260	401 025 7409	CARBON	220 JA 1/6W	1
R261	401 027 0309	CARBON	47K JA 1/6W	1
R262	401 025 8208	CARBON	22K JA 1/6W	1
R263	401 024 7004	CARBON	1K JA 1/6W	1
R264	401 026 9600	CARBON	470 JA 1/6W	1
R265	401 024 6700	CARBON	100 JA 1/6W	1
R266	401 025 8208	CARBON	22K JA 1/6W	1
R267	401 025 8208	CARBON	22K JA 1/6W	1
R268	401 025 7102	CARBON	22 JA 1/6W	1
R269	401 025 7102	CARBON	22 JA 1/6W	1
R270	401 026 3905	CARBON	330 JA 1/6W	1
R271	401 024 7400	CARBON	10K JA 1/6W	1
R275	402 016 5602	FUSIBLE RES	5.6 J- 1/2W	1
R276	402 016 5602	FUSIBLE RES	5.6 J- 1/2W	1
R280	401 018 5501	CARBON	330K JA 1/4W	1
R281	401 027 3003	CARBON	56K JA 1/6W	1
R282	401 026 7408	CARBON	36K JA 1/6W	1
R283	401 025 7409	CARBON	220 JA 1/6W	1
	ASSY,PCB,POWER			
112	620 210 4096	Assy,PCB,Power		1
	620 022 2587	EC Terminal 1P		2
	⚠ 433 003 9839	FUSE 250V T0.63A		2
	620 207 9158	Fuse Holder,Taping		4
	620 053 6905	Cover Safety		1
S1	⚠ 620 200 7595	Switch,Push,1-1		1
WCN11	620 207 3873	Assy,Connector-S,6P		1
C1	⚠ 620 006 6679	Capacitor 0.01MF400V		1
	ASSY,PCB,SENSOR			
113	620 207 0155	Assy,PCB,Sensor		1
CN8	620 201 0373	Socket,Holder,3P		1
WCN8	620 207 0841	Wire,Jumper,3S		1
PC501	407 109 7501	PHOTO COUPLE TLP806		1
	ASSY,PCB,REAR			
114	620 210 8605	Assy,PCB,Rear		1
	620 207 0988	Cover,Shield		1
	620 211 1483	Coil,Air,Inductor		4
CN13	620 200 2576	Socket,Holder,5P		1
J401	620 017 5500	Pin Jack 2P		1
J402	620 017 5500	Pin Jack 2P		1
J403	620 021 5655	Plug 4P		1
C401	403 121 9509	CERAMIC	0.1U Z 50V	1
	ASSY,PCB,TACT SWITCH			
115	620 207 0179	Assy,PCB,Tact Switch		1
	620 202 8725	Switch,Tact,Taping		2
CN7	620 201 0373	Socket,Holder,3P		1
WCN7	620 207 0841	Wire,Jumper,3S		1
	ASSY,PCB,DISPLAY			
116	620 207 0186	Assy,PCB,Display		1
	620 200 7540	Cushion,Rubber		2

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
	620 202 6725	Switch,Tact,Taping	18
	620 206 5397	Fluorescent TUBEFIP9CBM7A	1
WCN9	620 207 0803	Assy,Connector-S,11P	1
WCN10	620 207 0810	Assy,Connector-S,14P	1
D801	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D802	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D803	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D804	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D805	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
D806	407 008 0405	DIODE GMB01-BT	1
or	407 133 2206	DIODE WG4148	1
ASSY,PCB,REM			
117	620 207 0193	Assy,PCB,REM	1
	620 200 6909	Converter,Remote,DET	1
or	620 202 4615	Converter,Remote Control	1
WCN12	620 207 0834	Assy,Connector-S,3P	1
ASSY,PCB,MOTOR			
118	620 207 0209	Assy,PCB,Motor	1
	620 016 5914	Leaf Switch	3
WCN4	620 207 0797	Assy,Connector-S,8P	1
C2	403 001 5805	CERAMIC 0.022U N 16V	1

NOTES:

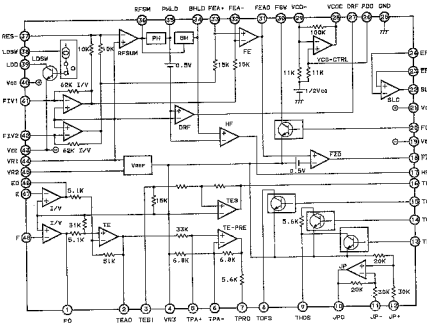
1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

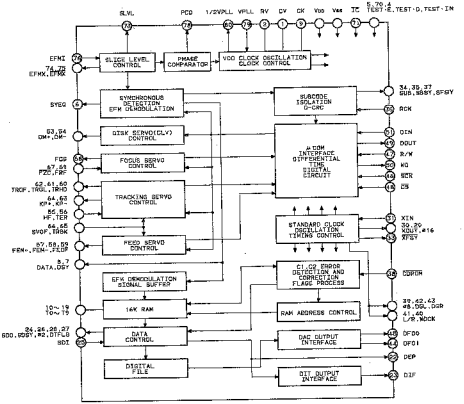
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

IC BLOCK DIAGRAM

IC101 LA9200NM BLOCK DIAGRAM
(Servo Signal Processor)

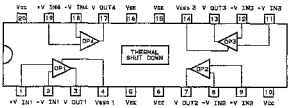


IC102 YM7121B BLOCK DIAGRAM
(Digital Signal Processor)

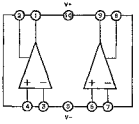


IC BLOCK DIAGRAM (Continued)

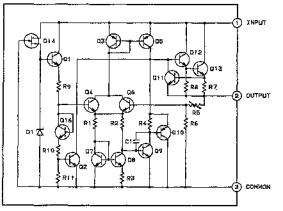
IC103 FA5205P BLOCK DIAGRAM
(Power Driver Amp.)



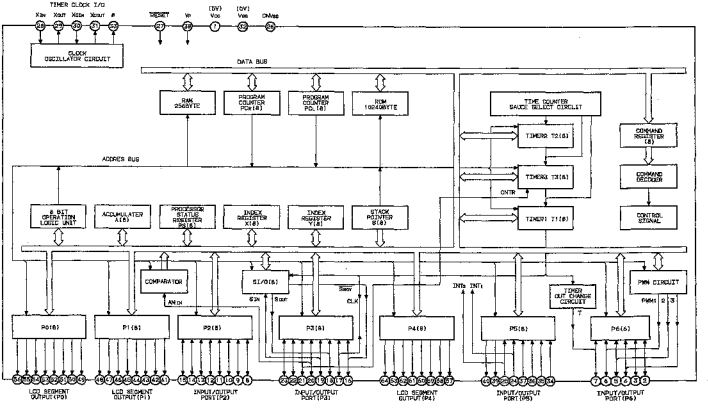
IC104 LA6510 BLOCK DIAGRAM
(Dual Operational Amp.)



IC109 TA78L006AP BLOCK DIAGRAM
(Constant Voltage Regulated Power Supply)

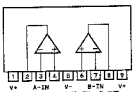


IC105 M50957-242SP BLOCK DIAGRAM
(System Control)

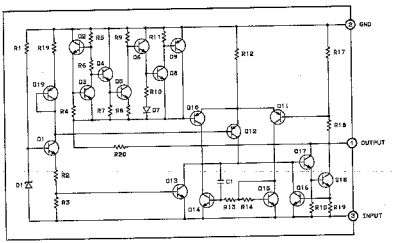


IC BLOCK DIAGRAM (Continued)

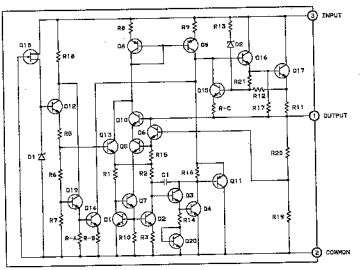
IC107,108 LA6458SS BLOCK DIAGRAM
(Dual Operational Amp.)



IC110 TA79L006P BLOCK DIAGRAM
(Constant Voltage Regulated Power Supply)



IC111 NJM78M05FA BLOCK DIAGRAM
(Constant Voltage Regulated Power Supply)



REFERENCE VOLTAGE (CD Main P.C.Board Section)

IC PIN NUMBERS DC VOLTAGES																					
Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC101	LA5200NM	0V	0V	0.2V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	4.2V	4.2V	0V	4.2V	0V	0V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		0V	2.0V	0V	2.5V	0V	2.4V	0V	2.4V	2.2V	0V	0V	0.5V	0V	0V	0V	0V	0V	0V	0V	5.8V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		0V	0V	−5.5V	0V	0V	0V	0V	0V	—	—	—	—	—	—	—	—	—	—	—	—

IC PIN NUMBERS DC VOLTAGES																					
Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC102	YM7121B	0V	0V	5.0V	4.9V	4.9V	0V	0.2V	0V	2.9V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	1.5V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		0V	0V	0V	0V	0V	4.8V	4.9V	1.9V	0V	2.1V	2.0V	4.9V	4.0V	0V	0V	0V	0V	4.9V	1.9V	2.4V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		2.4V	1.6V	1.6V	0V	0V	4.9V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	4.9V	0V
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
		0V	4.9V	0V	0V	4.9V	4.9V	4.2V	0V	0V	4.9V	4.9V	4.9V	2.5V	0V	2.5V	0V	0V	0V	4.0V	2.0V

IC PIN NUMBERS DC VOLTAGES																					
Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC103	FA5209P	0V	0V	0V	−12.1V	−12.1V	−12.1V	0V	0V	0V	11.2V	0V	0V	0V	−12.1V	−12.1V	−12.1V	0V	0V	0V	11.2V
IC104	LA5610	0V	0V	0V	0V	−12.2V	0V	0V	0V	0V	11.2V	—	—	—	—	—	—	—	—	—	—

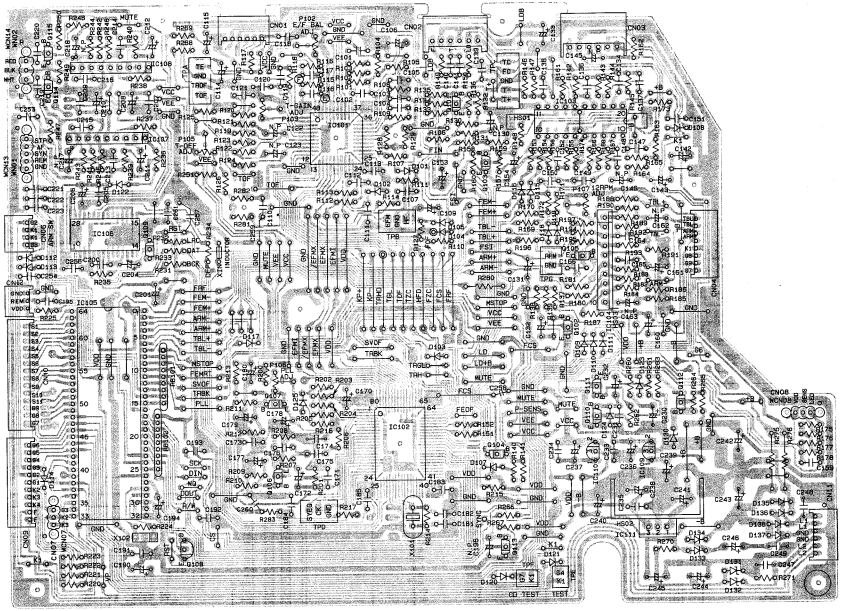
IC PIN NUMBERS DC VOLTAGES																					
Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC105	M50957	4.9V	0V	0V	0V	0V	0V	0V	3.8V	0V	4.9V	4.9V	3.5V	5.0V	5.0V	4.9V	0V	4.9V	0V	4.9V	0V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		0V	4.2V	4.9V	4.9V	0V	0V	4.9V	2.1V	0.9V	0V	4.9V	0V	2.4V	0V	0V	0V	0.4V	−28.1V	−27.9V	−24.4V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		−24.4V	−24.3V	−24.3V	−24.3V	−24.3V	−24.3V	−24.3V	−24.3V	−27.9V	−27.9V	−27.8V	−27.6V	0V	−27.8V	−27.8V	−27.9V	−27.8V	−19.0V	−18.7V	−5.0V
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
		−16.8V	−13.0V	−9.9V	−13.1V	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

IC PIN NUMBERS DC VOLTAGES																					
Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC106	LC37000A	2.4V	4.7V	4.6V	5.0V	2.9V	0V	2.4V	0V	0V	0V	4.9V	1.0V	0V	0V	0V	0.5V	0.4V	0.4V	0.4V	0.4V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		0V	0V	2.0V	2.5V	0V	0V	0V	2.4V	—	—	—	—	—	—	—	—	—	—	—	—

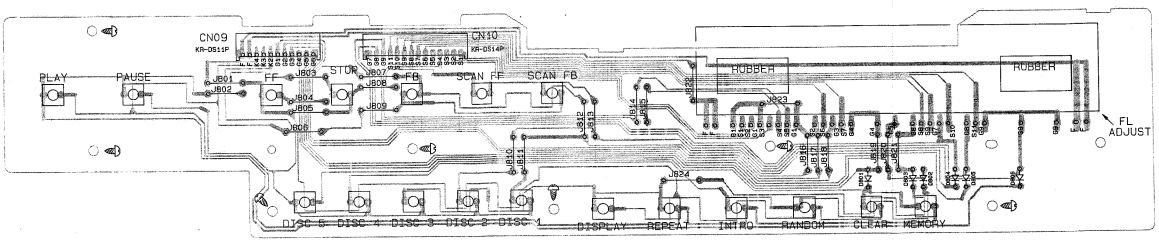
IC PIN NUMBERS DC VOLTAGES																					
Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC107	LA6458SS	5.9V	2.4V	2.4V	2.4V	−5.8V	0V	0V	0V	5.9V	—	—	—	—	—	—	—	—	—	—	—
IC108	LA6458SS	5.9V	2.4V	2.0V	2.4V	−5.8V	0V	0V	0V	5.9V	—	—	—	—	—	—	—	—	—	—	—
IC109	TA78L006AP	11.5V	5.9V	0V	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IC110	TA79L009P	−5.8V	0V	−12.3V	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IC111	NJM78M05FA	11.5V	0V	5.0V	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

TRANSISTOR DC VOLTAGES														
Ref. No.	DEVICE	B	C	E	Ref. No.	DEVICE	B	C	E	Ref. No.	DEVICE	B	C	E
Q101	2SC536	0V	0V	0V	Q106	2SD1012	0.6V	0V	0V	Q111	2SA608	8.0V	−3.9V	6.9V
Q102	2SC3400	0V	2.9V	0V	Q107	2SC536	4.6V	4.9V	0V	Q112	2SC536	5.6V	10.1V	6.9V
Q103	2SC536	6.9V	0V	0V	Q108	2SC536	0.6V	0V	0V	Q113	2SC3400	0V	4.9V	0V
Q104	2SA608	4.8V	0.3V	5.0V	Q109	2SC3400	0V	4.9V	0V	Q114	2SD1012	−3.9V	0V	0V
Q105	2SC3400	0V	0V	0V	Q110	2SC3400	0V	6.0V	0V	Q115	2SD1012	−3.9V	0V	0V

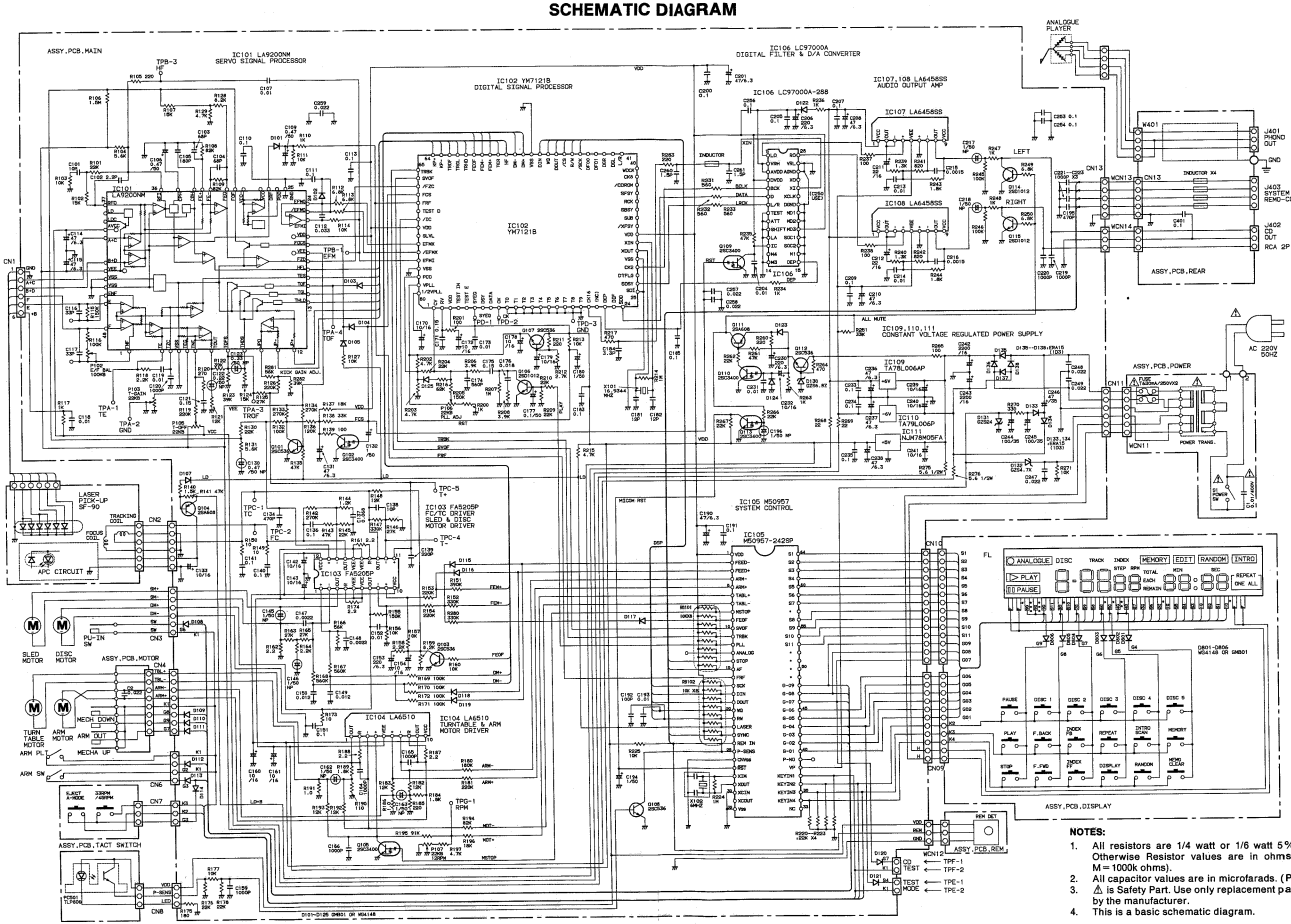
MAIN PRINTED CIRCUIT BOARD
(BOTTOM VIEW)



DISPLAY P.C.BOARD
(BOTTOM VIEW)



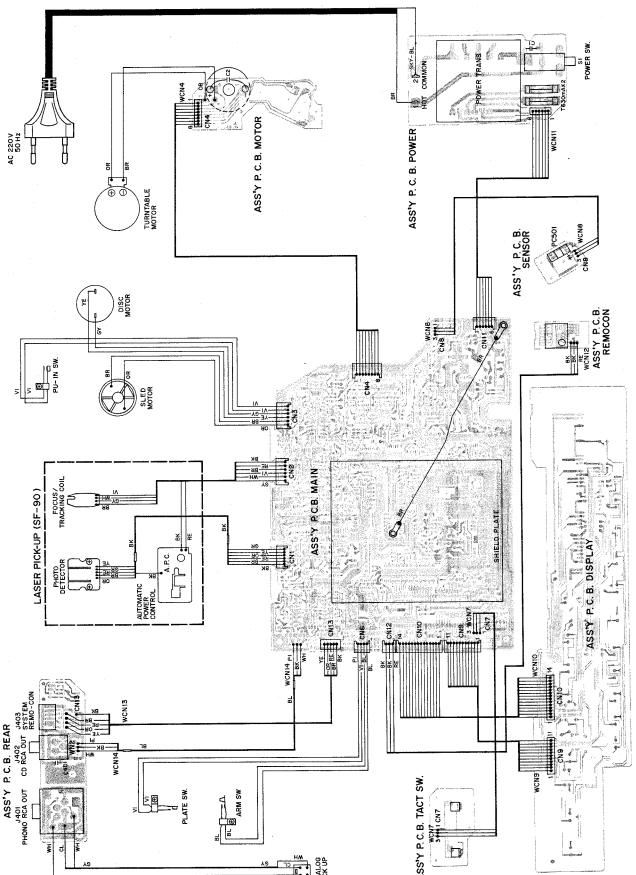
SCHEMATIC DIAGRAM



NOTES:

1. All resistors are 1/4 watt or 1/6 watt 5% unless marked. Otherwise Resistor values are in ohms (K=1000 ohms. M=1000k ohms).
2. All capacitor values are in microfarads. (P=picofarads).
3. ⚠ is Safety Part. Use only replacement parts recommended by the manufacturer.
4. This is a basic schematic diagram.

POINT TO POINT WIRING DIAGRAM

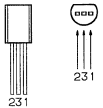


IC & TRANSISTOR LEAD IDENTIFICATION

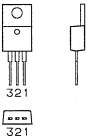
TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA1317 2SA608 2SC3400 2SC536 2SD1012		
TERMINAL NAME		
B → BASE C → COLLECTOR E → EMITTER		

Bezeichnung/Description
SERVICE MANUAL
Teile-Nr./Parts No. Menge/Quantity
WM570621 1
Lagerort LS-Nr.
38B04 820189 / 2
SANYO FISHER Vertriebs GmbH

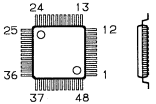
TA78L006AP FRONT/BOTTOM VIEWS
TA79L006P FRONT/BOTTOM VIEWS



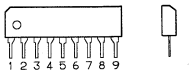
NJM78M05FA FRONT/BOTTOM VIEWS



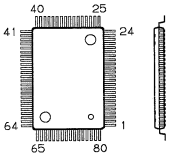
LA9200NM TOP/SIDE VIEWS



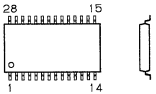
LA6458SS FRONT/SIDE VIEWS



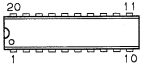
YM7121B TOP/SIDE VIEWS



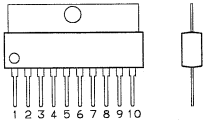
LC97000A-288 TOP/SIDE VIEWS



FA5205P TOP VIEW



LA6510 FRONT/SIDE VIEWS



M50957-242SP TOP VIEW

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December/'90/1,200/H **Printed in Japan**